AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph extending from p. 4, line 17 to p. 5, line 18 with the following replacement paragraph:

Three new technologies directed at obtaining a faster, more reliable replacement for flash memory are currently under development. In one technology, FRAM (Ferroelectric RAM), a ferroelectric material is used to store data. An FRAM memory cell includes a capacitor containing a ferroelectric material such as PZT that records binary information based on the orientation of the ferroelectric domains of the ferroelectric material. The ferroelectric domains can be ~~reversible~~ reversibly aligned in one of two directions to define two binary states that can be distinguished in a read operation based on determining a current upon application of a short voltage pulse to the capacitor. Depending on the orientation of the ferroelectric domains relative to the electric field associated with the voltage pulse, the current induced by the voltage pulse is either high or low. A second technology, MRAM (Magnetoresistive RAM), utilizes the ferromagnetic properties of atoms. MRAM is a magnetic analogue of FRAM that relies on the ferromagnetic characteristics of a ferromagnetic material to store information. A ferromagnetic material includes domains having a magnetic dipole, where the domains can be aligned and oriented under the action of an external magnetic field. As in FRAM, the orientation of aligned magnetic domains defines two binary states that are used to record information. In one device configuration, MRAM includes a magnetic tunnel junction that includes two ferromagnetic layers separated by a tunnel oxide where the relative orientation of the magnetic domains of the two ferromagnetic layers dictates that current flow across the junction. The current flow is high when the two ferromagnetic layers have parallel magnetic domains and is low when the two

ferromagnetic layers have anti-parallel domains. A third technology with the potential to replace flash memory is Ovonic Unified Memory (OUM). OUM records information through the phase of a chalcogenide phase change material. Chalcogenide phase change materials can be reversibly transformed between amorphous and crystalline states where each state may correspond to a different binary state. Since the amorphous and crystalline states differ in resistance by two or more orders of magnitude, the two states are readily distinguishable.